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| 10/536,703 | 05/27/2005 | Graham Finlayson | 78104090-N16933 | 9265 |
| 25005 | 7590 | 02/22/2008 | EXAMINER | |
| Intellectual Property Dept. Dewitt Ross & Stevens SC 2 East Mifflin Street Suite 600 Madison, WI 53703-2865 | | | KASSA, YOSEF | |
| | | | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/536,703

Applicant(s)

FINLAYSON, GRAHAM

Examiner

YOSEF KASSA

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/27/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhaṣkar (U.S. Patent 6,580,825).

With regard to claim 1, Bhaska discloses a method of processing an image signal comprising deriving measurements of an input image signal including at least a measurement representing the luminance (1) of the signal, characterized in that the method comprises the further steps of calculating two of the following (refer to col. 4, lines 34-40): the local mean, the local standard deviation (refer to col. 4, lines 48-51), the local maximum and the local minimum of said measurements (refer to col. 5, lines 27-33), computing therefrom local standard coordinates which are independent of brightness and contrast (refer to col. 7, lines 20-28), and forming an output image signal from the standard coordinates (refer to Figs 4C item 80). Although, Bhaska reference does not expressly call for computing therefrom local standard coordinates which are independent of brightness and contrast, it would have been obvious if not inherent, that Bhaska reference discloses that no modification is necessary if the standard deviation in the luminance is greater than the contrast threshold. Thus, an ordinary artisan would have recognized the limitation no modification is necessary if the standard deviation in the

luminance is greater that the contrast threshold is used in Bhaska reference is same as the above limitation.

With regard to claim 2, Bhaska discloses wherein the local mean and the local standard deviation are calculated and said standard co-ordinates are the local z-scores (refer to col. 7, lines 38-45).

With regard to claim 3, Bhaska discloses wherein, in parallel with the computation of the z-scores, colour channel signals are obtained by dividing by said standard deviation (refer to col. 3, lines 45-49).

With regard to claim 4, Bhaska discloses wherein the local maximum and the local minimum are calculated and said standard co-ordinates are the local max-min scores (refer to col. 8, lines 16-35).

With regard to claim 5, Bhaska discloses wherein the local minimum and the local mean are calculated and said standard co-ordinates are the local min-mean scores (refer to col. 8, lines 1-8).

With regard to claim 7, Bhaska discloses, besides luminance, said opponent responses include red-greenness and yellow-blueness (refer to col. 6, lines 60-67).

Claim 8 is similarly analyzed and rejected the same as claim 6.

With regard to claim 9, Bhaska discloses wherein a grey scale output image is obtained and saturation is not preserved (refer to col. 5, lines 27-30).

With regard to claim 10, Bhaska discloses wherein a colour output image is obtained and saturation is preserved (refer to col. 5, lines 34-42).

With regard to claim 1, Bhaska discloses a computer when programmed to perform a method according to any preceding claim (refer to Fig. 2).

Claim 12 is similarly analyzed and rejected the same as claim 1.

Claim 13 is similarly analyzed and rejected the same as claim 7.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhaskar (U.S. Patent 6,580,825), and further in view of Trifonov (U.S. Patent 6,826,310).

With regard to claim 6, Bhaska discloses before the calculating step, (logarithms) are taken of the R, G and B colour channel values and opponent responses are computed (refer to col. 6, lines 17-22). Bhaska does not disclose expressly for the phase Logarithm. However, at the same field of endeavor, Trifonov discloses this feature (please refer to col. 12, lines 15-26). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching Trifonov the phrase Logarithm into Bhaska system. The suggestion/motivation for doing so would have been to provide Logarithm equation (refer to col. 12, lines 20-24 of Trifonov). Therefore, it would have been obvious to combine Trifonov with Bhaska to obtain the invention as specified in claim 6.

Claim Objections

2. Claims 8-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 8-11. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's

functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32

USPQ2d at 1035.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 11 defines a “A computer when programmed to perform....” embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., “When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). That is, the scope of the presently claimed “A computer when programmed to perform” can range from paper on which the program is written for computer configuration, to a program simply contemplated and memorized by a person to set-up computer devices. The examiner suggests amending the claim to embody the program on “computer-readable medium” or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Other Prior Art Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (6919892), (6990249), (6816193) and (6694051).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (571) 272-7452. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and (571) 273-8300 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

02/19/2008.

YOSEF KASSA
PRIMARY EXAMINER

